



Light-Up Glasses

Make your own glasses that light up! Just add two LEDs, a CR2032 battery, and some Maker Tape.

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INTRODUCTION

Make your own glasses that light up! Just add two LEDs, a CR2032 battery, and some Maker Tape.

You can make this project (and many more!) with our **Paper Circuits Kit**.



TOOLS:

- [Printer](#) (1)
- [Scissors](#) (1)
- [X-ACTO Knife](#) (1)
- [Push Pin](#) (1)
- [Glue Stick](#) (1)
- [Markers, Crayons, or Colored Pencils](#) (1)
- [Glitter Glue](#) (1)

Optional



PARTS:

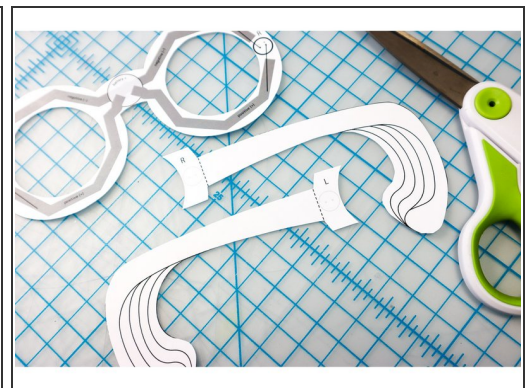
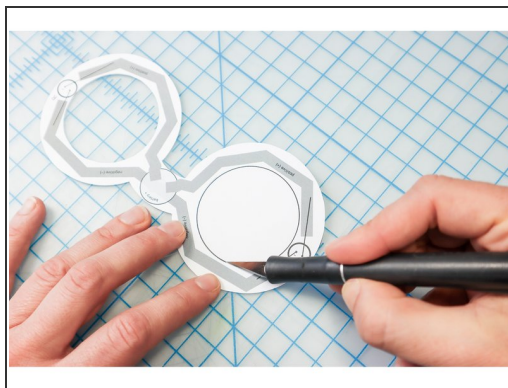
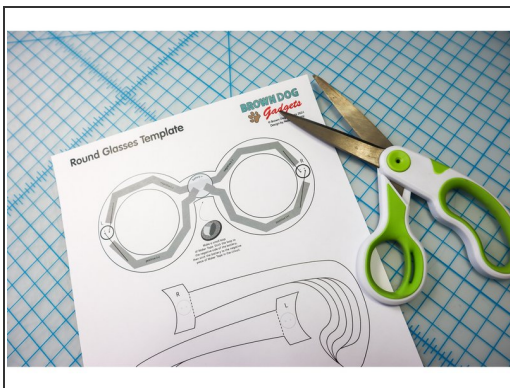
- [Paper Circuits Kit](#) (1)
- [Cardboard](#) (1)

Step 1 — Choose a Frame Shape and Print



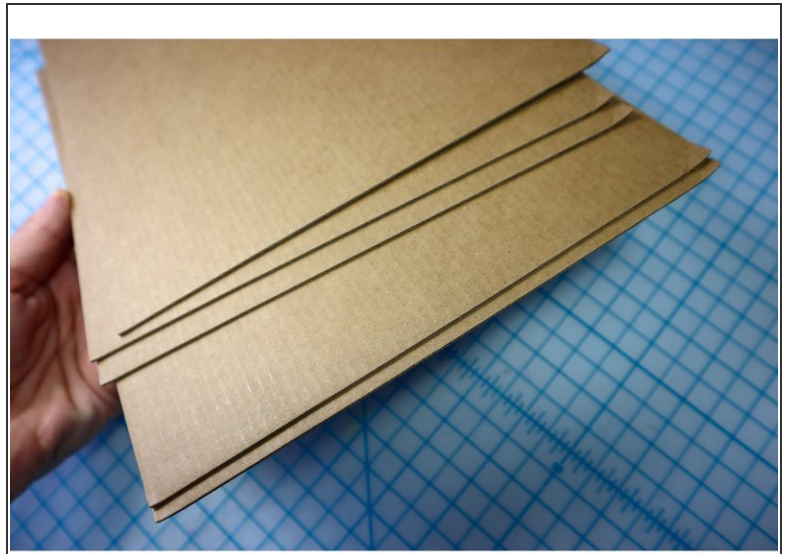
- Choose a frame shape and print the template. We'll use the "Round Glasses Template" for this tutorial, but the steps are the same for all frame shapes.

Step 2 — Cut out the Template



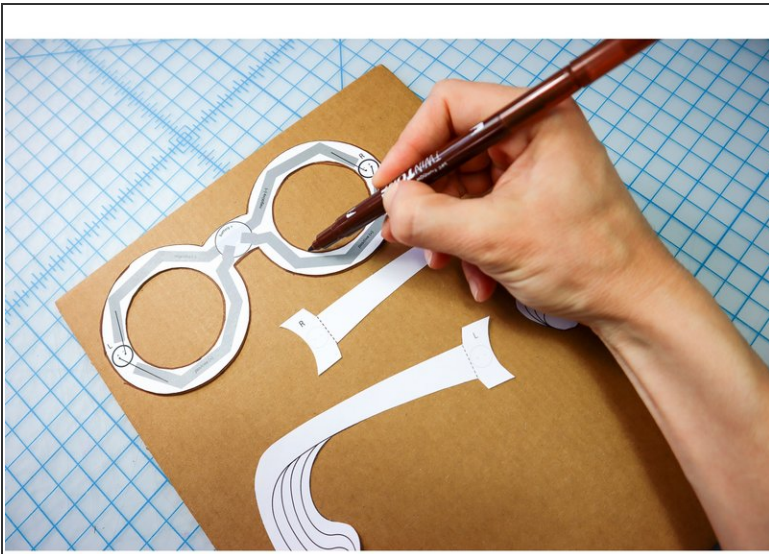
- Cut out the template frames and temples (the arms that go over the ears).
- Use a craft knife to cut out the interior lenses.

Step 3 — Gather Materials



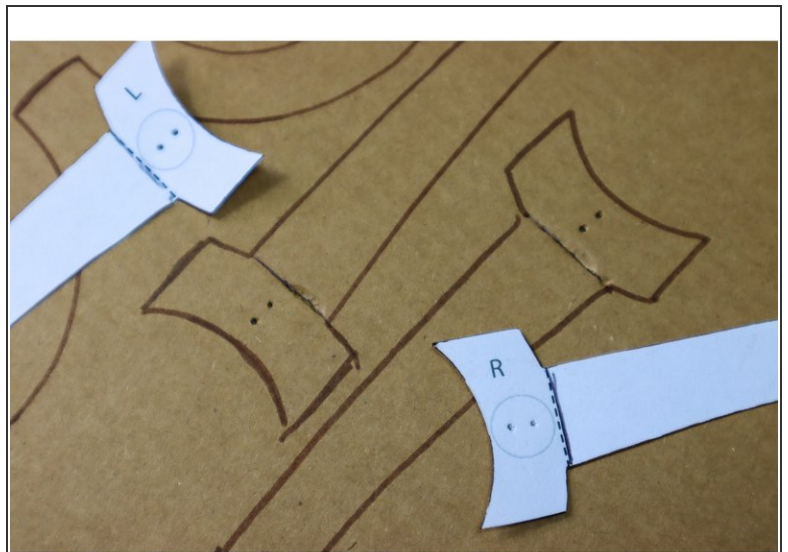
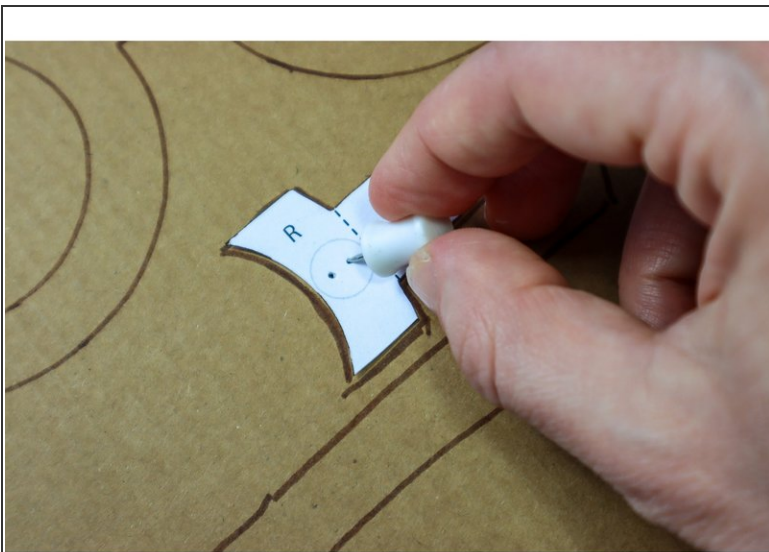
- To the recycling bin!
- We've found that the best material for this project is cereal boxes (also look for similar household packaging like swiffers or soda 12 pack containers.)
- If your recycling bin is empty, use thin sheets of cardboard (available to purchase online).

Step 4 — Trace the Template



- Trace the template onto the back of your material with a marker.

Step 5 — Make Holes with a Push Pin



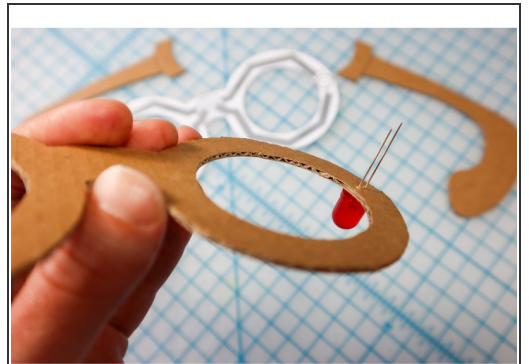
- Use a push pin or awl to make holes through the cardboard as shown on the template, where the LEDs will go.
- Mark the fold lines as well.

Step 6 — Cut out the Shapes



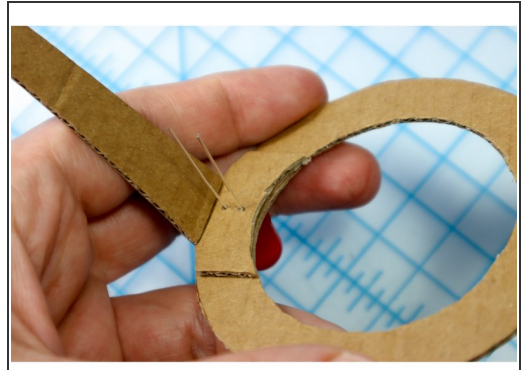
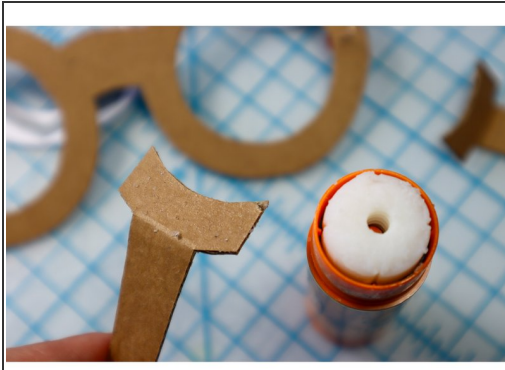
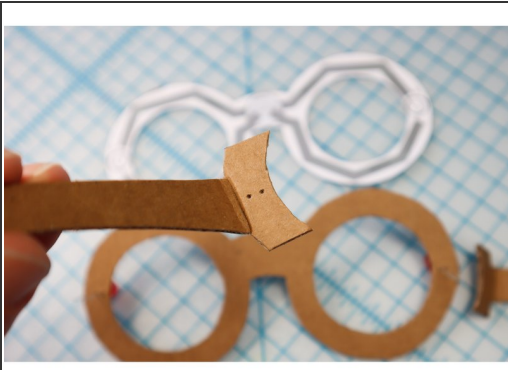
- Use scissors and/or a craft knife to cut out the shapes.

Step 7 — Add the LEDs to the Frames



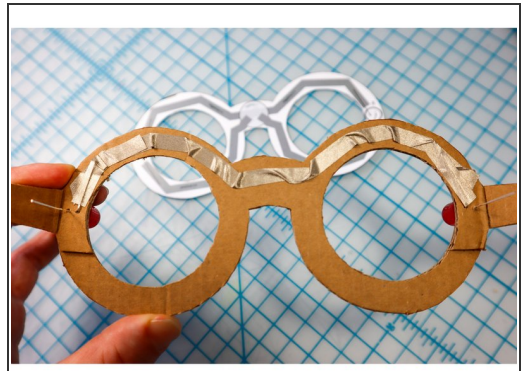
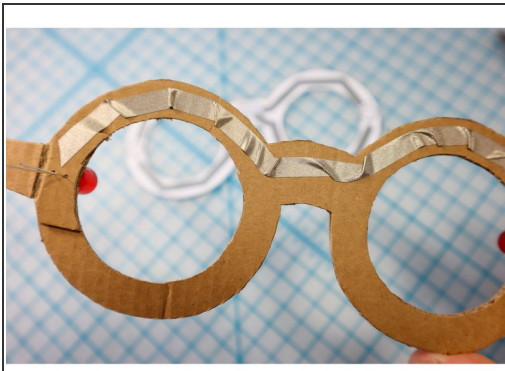
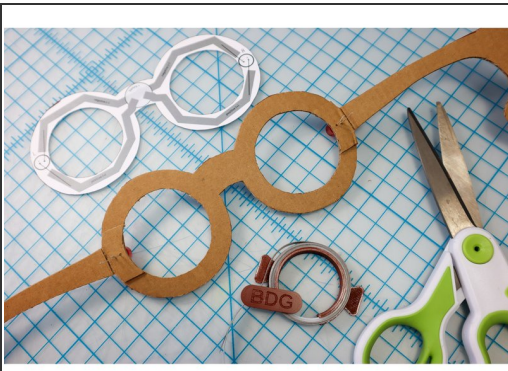
- Push the LEDs through the holes on the frames, with the **Positive** (Long Leg) facing away from the center.

Step 8 — Add Glue and Attach the Templates



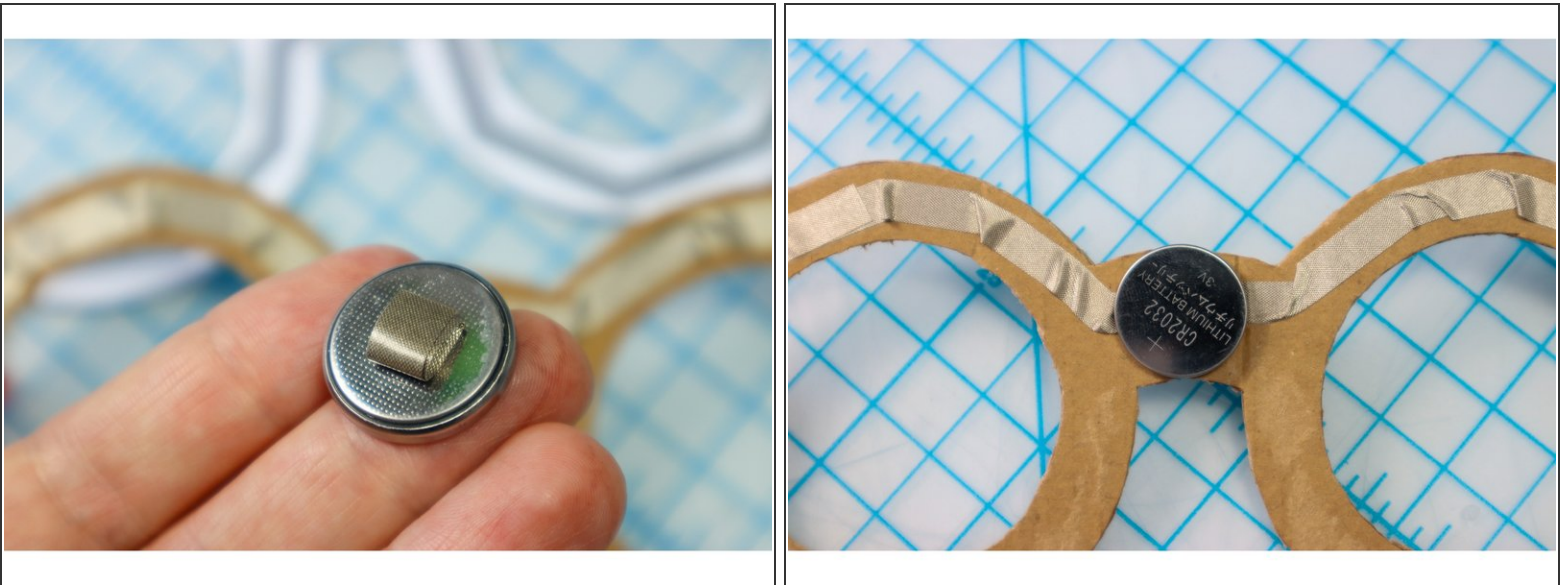
- Fold the templates along the line.
- Add glue to the bottom of the connector piece as shown.
- Thread the LED through the holes, aligning it with the frames to glue the templates in place.

Step 9 — Add Maker Tape



- Use the template as a guide to add a piece of Maker Tape across the top of the frames, connecting the shorter, **Negative** legs of the LEDs.
- Fold the shorter, innermost legs down flat against the Maker Tape.
- Secure them in place with another piece of Maker Tape on top as shown.

Step 10 — Add the Battery



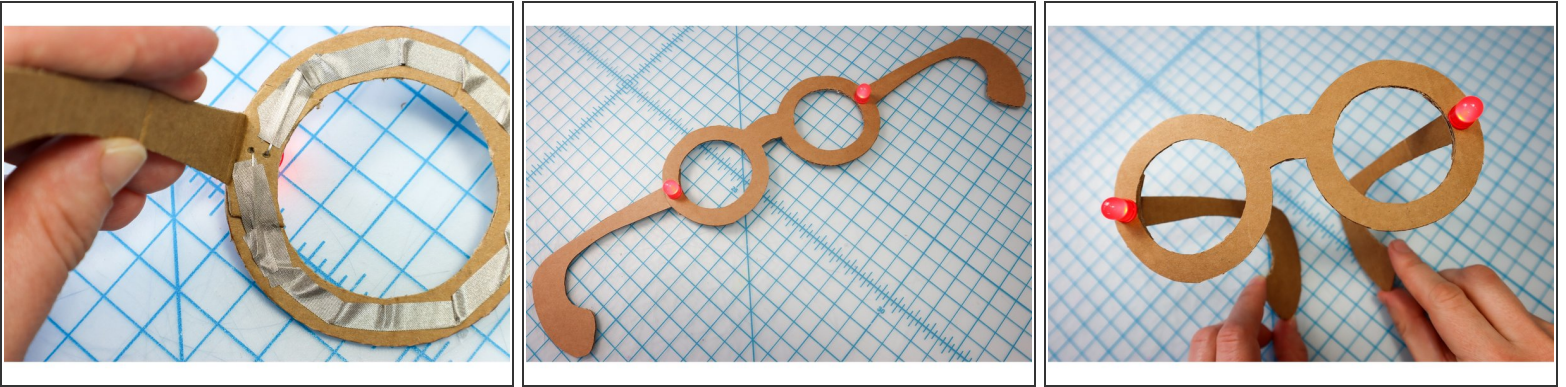
- Make a small loop of Maker Tape with the adhesive side out as shown, and place it on the **Negative** side of the battery.
- Place the battery on top of the piece of Maker Tape, making sure it is centered on the bridge of the frame.

Step 11 — Add More Maker Tape



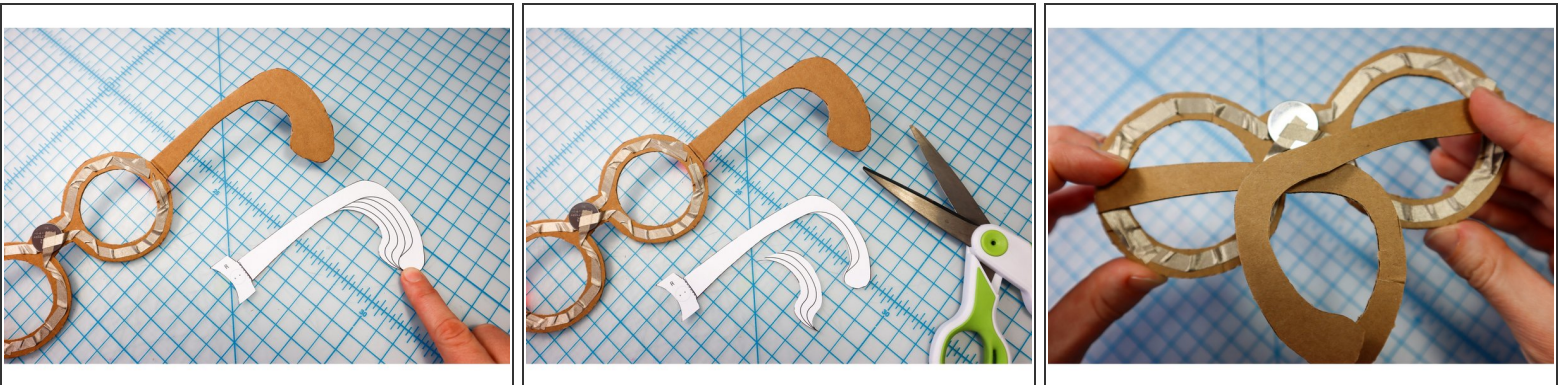
- Repeat the same on the bottom, connecting the piece of Maker Tape to the top of the battery as shown.
- Use a second piece of Maker Tape to connect the LED, and add a piece of Maker Tape on top of the LED's leg, just like the previous step.

Step 12 — It Should Light Up!



- With the circuit connected, it should light up! Check that both LEDs are illuminated, and if not, check the circuit connections on each side.

Step 13 — Custom Fit the Frames



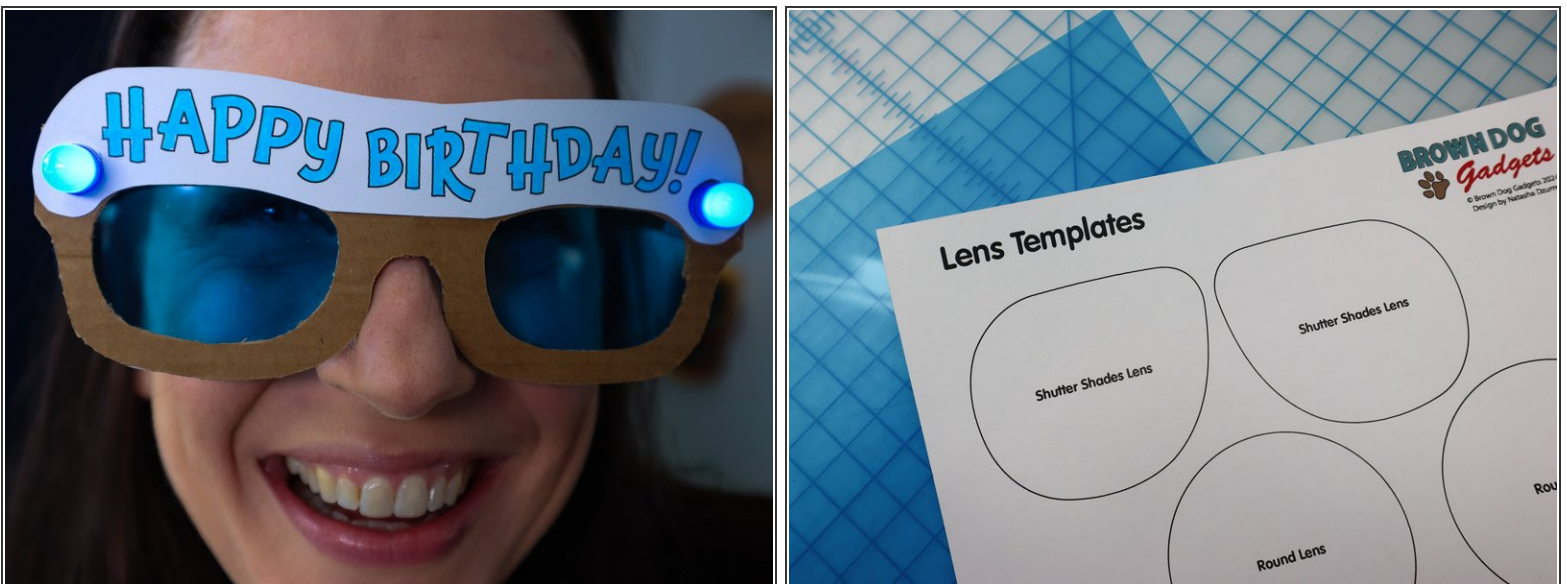
- Try on the frames - chances are, they are too small!
- Reference the sizing guide on the temple tips and choose the appropriate size for your head (start small, you can always go bigger!)
- Cut the template to size, trace the new line onto the temples, and cut away the extra material.

Step 14 — Wear the Glasses, or Embellish!



- Your new frames are ready to wear!
- But wait, there's more! This project gets even more fun when you decorate your frames to express your unique style.
- Decorate the frames with common craft supplies, or use our embellishment templates to create party wear for holidays throughout the year.

Step 15 — Optional: Add Lenses



- As an optional step, use the lens templates to add lenses to your glasses.
- We used hot glue to attach colored acetate sheets to make these glasses extra cool!

Step 16 — Wear your Glasses!



- After you've decorated, wear your glasses for all to see!
- More on these designs:
 - [Easter Bunny Glasses](#)
 - [Rainbow / Shamrock](#)
 - [Disco Shudder Shades](#)
 - [Upcycled Glasses](#)
 - [Happy Birthday / New Year](#)